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Willimastown, MA 01267

EXAMINER
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WRIGHT, PATRICIA KATHRYN

ART UNIT	PAPER NUMBER
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1797

MAIL DATE	DELIVERY MODE
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11/01/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

Application No.

10/769,017

Applicant(s)

TANAAMI, TAKEO

Examiner

P. Kathryn Wright

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 12 October 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-6, 22 and 32 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-6, 22 and 32 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 1/30/2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
  - 2) ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |                                                                                        |                                                                   |
|----------------------------------------------------------------------------------------|-------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>6/2005</u>                                                    | 6) <input type="checkbox"/> Other: _____                          |

### **DETAILED ACTION**

1. The Examiner hereby acknowledges the preliminary amendment filed, January 30, 2004, in which claims 7-21 and 23-31 were cancelled. The preliminary amended was inadvertently overlooked by the Office. The previous Restriction requirement, mailed September 14, 2007, was directed to the cancelled claims. Therefore the Restriction requirement is hereby withdrawn. The Examiner regrets any inconvenience this may have caused. Claims 1-6, 22 and 23 are currently pending.

### ***Specification***

2. The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required: "means for arranging" (claims 1-2), "means for developing" (claim 3), "means for separating" (claim 5), and "means for restricting" (claim 6).

### ***Claim Rejections - 35 USC § 112***

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claim 1-6, 22 and 32 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 recites a "means for arranging" (claims 1-2), "means for developing" (claim 3), "means for separating" (claim 5), and "means for restricting" (claim 6). The Examiner has interpreted these limitations as a means-plus-function limitations covered

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by 35 USC 112, sixth paragraph. This interpretation is proper since the claim limitations recite “means for” language, and the “means for” is not modified by sufficient structure for achieving the specified function. A means-plus-function limitation recites a function to be performed rather than definite structure or materials for performing that function. For claims falling under 35 USC 112, sixth paragraph, Examiners are required to construe claims as covering the corresponding structure, material, or acts described in the specification and equivalents thereof, see *In re Donaldson Co.*, 29 USPQ2d 1845 (Fed. Cir. 1994).

However, the specification does not set forth the corresponding structure for the “means for developing” (claim 3), “means for separating” (claim 5), and “means for restricting” (claim 6). Thus, it is unclear and indefinite what structures Applicant is intending to encompass with these limitations.

Clarification and/or correction is required.

Furthermore, claim 5 recites the “means for separating” the spectroscopic information from noise using known spectra and regression method. It is not clear what is limitations Applicant is trying to encompass with the known spectra and regression method. Furthermore, the specification does not clarify what is meant by the “known spectra and regression method”. It should be noted that only structural language is determinative of the metes and bounds of an apparatus claim, not method steps.

Claim 22 recites “wherein said biochip is a transparent substrate”. This recitation is indefinite because it cannot be clearly determined if the biochip has been positively recited as part of the claimed device. The claims not appear to positively recite the

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biochip as a claimed element of the biochip reader. Therefore, claim 22 fails to further limit the parent claim.

Clarification/ and/or correction is required.

### ***Claim Objections***

5. Claim 22 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. See reasons delineated above.

### ***Claim Rejections - 35 USC § 102***

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

7. Claims 1-6, 22 and 32 are rejected under 35 U.S.C. 102(b) as being anticipated by Ogino (US Patent no. 5,422,712).

Ogino discloses a biochip reader for measuring binding affinity of samples which comprises a confocal microscope configuration (claim 32) communicating with a sample biochip (flow cell 16) through an objective lens 14 (see for example, Fig. 1). Specifically, Ogino teaches a biochip reader comprising a "means for arranging" which comprises a polychromator, a prism 28 and a lattice (grating) disposed between the sample and the optical reader 34.

Regarding claim 3, Ogino also teaches a "means for developing" the spectroscopic information, i.e., processor 38. The biochip reader of Ogino also includes a "means for separating" 30 (claim 5) from noise using known spectra and regression method.

Regarding claim 6, Ogino teaches a slit or aperture 68 (see col. 8, lines 53 et seq. and Fig. 10)

Please note, that the plurality of sample arranged in spots or arrays are not positively recited in the claims. Moreover, even if the plurality of samples are positively recited in the claim it would not serve to patentably distinguish the device since the inclusion of material worked upon by a structure being claimed is of no significance in determining patentability of an apparatus claim. See MPEP 2115.

Instant claim 22 is inherently anticipated by Ogino because it fails to further limit parent claim 1.

8. Claims 1-5, 22 and 32 are rejected under 35 U.S.C. 102(e) as being anticipated by Kauvar et al. (US Patent no. 6,492,125), hereinafter "Kauvar".

Kauvar discloses a biochip reader for measuring binding affinity of samples which comprises a confocal microscope communicating with a sample biochip through an objective lens (Fig. 1). Specifically, Kauvar teaches a biochip reader comprising a "means for arranging" which comprises a grating and Fourier spectrometer (claims 1-2) and a "means for developing" the spectroscopic information, i.e., computer (claim 3), see paragraph [0008]. The biochip reader of Kauvar also includes a "means for separating" (claim 5) from noise using known spectra and regression method and an aperture (see col. 8, lines 20 et seq.)

Please note, that the sample is not positively recited in the claims. Moreover, even if the plurality of samples arranged in an array are positively recited in the claim it would not serve to patentably distinguish the device since the inclusion of material worked upon by a structure being claimed is of no significance in determining patentability of an apparatus claim. See MPEP 2115.

Instant claim 22 is inherently anticipated by Kauvar because it fails to further limit parent claim 1. Nevertheless, Kauvar teaches a biochip formed from a transparent substrate to allow passage of the excitation light and the fluorescent light, wherein the excitation light is irradiated from the bottom side of the biochip opposite the top side on which the plurality of samples are disposed (see Fig. 1.)

With respect to claim 32, the apparatus depicted by Kauvar in Figure 1 comprises a scanning confocal microscope for fluorescence measurements.

### ***Conclusion***

9. No claims are allowed.

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10. The prior art made of record and not relied upon is considered pertinent to Applicant's disclosure as general background information related to Applicant's field of endeavor.


11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to P. Kathryn Wright whose telephone number is 571-272-2374. The examiner can normally be reached on Monday thru Thursday, 9 AM to 6 PM, EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jill Warden can be reached on 571-272-1267. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

October 29, 2007

pkw

  
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